Ablation, influence of, on enzyme reducing systems, 307
Acetone powder, preparation of human growth hormones from, 559
Acidosis, diabetic, glutamine synthesis in, 203
ACTH, activity, of fetal pituitary, 799
effect of, in adrenal glands, 293
on glucose metabolism in adrenal, 113
feedback control of, 452
hypothalamic neurohumor release of, in peripheral blood, 298
Lipscomb-Nelson bio-assay for, modification of, 325
pituitary, and compensatory adrenal hypertrophy, 986
sensitive biologic assay for, 13
Adipose tissue, metabolism of, studies on, 57, 68
Adrenal, cortex, glycogenic effect of formaldehyde on, 390
in maintenance of hypertension, 422
serotonin uptake and action on, 407
of sodium-depleted rat, distribution of glycogen, lipid and glucose-6-dehydrogenase activity in, 847
cortical function, in dogs with isolated pituitaries, 926
dehydrogenase activity, fetal, 629
fetal interrelationships of, with maternal ovaries, 31
glands, effect of hyperglycemia and hypoglycemia on glycogen content of, 745
rat and bovine, effect of ACTH in, 293
of woodchucks, seasonal changes in, 431
hypertrophy, compensatory, and pituitary ACTH, 986
necrosis, and 7, 12-DMBA, 972
spontaneous vacuolar degeneration of, in pregnant rabbits, 143
weight of, effect of light on, 667
Adrenalectomy, effects of, on fatty acid synthesis, 541
Adrenocortical activity, in mice, 267
Age, influence of, on enzyme reducing systems, 307
Aldosterone, excretion, in feces of rats treated with estradiol, 598
experimental vascular disease elicited by, 505
Aldosterone-protein interaction, in competition with steroids, 893
Aldosterone-stimulating material in urine, 174
Alpha islets, extirpation of, producing glucagon deficiency, 464
α_2-Corticotrophin-releasing factor, isolation and amino acid sequence of, 164
Amino acids, accumulation of, effect of bovine growth hormone on, 516
effect of growth hormone on transport of, 513
Anticoagulants and the uptake of L-triiodothyronine by rat erythrocytes, 570
Antidiuretic responses to neurohypophysial hormones, 536
Anti-insulin serum, effect of, on hepatic metabolism, 673
Antiserums, thyrotropin, immunologic and biologic properties of, 254
Antithyroid compounds, effect of, on deiodination of thyroxine, 94
Aromatization, 19OH-androstenedione in, 723
Ascorbic acid, ovarian, effect of Chloretone on, 474

Benzothiazide, effect of derivative of, on water permeability of isolated membranes, 332
Blood, adrenal venous, method for collection of, 990

XUM

supply, hypophysial, nature of, in rat, 857
Bone, parietal, glycogenolytic action of epinephrine on, 901
Brain excitability, effect of male hormones on, 609

Calciphylaxis, sensitization to, by endogenous parathyroid hormone, 554
Cells, pineal parenchyma, morphologic changes in when exposed to continuous light or darkness, 888
Cellulose acetate, immunodiffusion on, of highly purified human growth hormone, 734
Chloretone, effect of, on ovarian ascorbic acid, 474
Corpulence, heritage of (presidential address), 337
Corticoids, thymolytic activity of, with other steroids, 271
Corticosteroids, adrenal, inhibitors of 17α-hydroxylation of, 479
in blood of Atlantic hagfish, 329
and electrolyte excretion, 768
Corticosterone, plasma, in experimental hypertension, 549

Deciduomata, rat, uterine histamine in, 960
Δ^4-Androsten-3,17-dione, formation of, in rat ovaries, 983
Desamino-oxytocin, and oxytocin, comparison of pharmacologic properties of, 977
Diabetes, experimental, produced by dietary factors, 77
insipidus, persistent, production of, 36
Diazo dyes, inhibitory effect on thyroid function of, 414
Diethylstilbestrol, phenathrene derivative of, estrogenic activity of, 514
sex modifications following egg immersion in solutions of, 24
Diphenylhydantoin, interaction of, with thyroxine, 496
D-Mannoheptulose, increased gluconeogenesis due to, 83
hyperglycemia due to, 90
DPPD, anti-uterotropic effect of, 779

Electrolyte excretion, and corticosteroids, 768
Enzyme, reducing systems, influence of ablation, hormones and age on, 307
Epinephrine, effect of, on phosphorylase and glycogen levels, 803
glycogenolytic action of, on parietal bone, 901
and thyroid iodide release, 7
Estradiol, aldosterone excretion of rats treated with, 598
Estrogen(s), biosynthesis of, 920
cloacal weight stimulation by, 669
cyclopentyl ethers of, 657
Estrone, some 3-ethers of uterotrophic, ovidotrophic and lipid-shifting properties of, 593
Estrus, prolonged, light-induced, effects of pinealectomy, pineal extract and pineal grafts on, 181

Fatty acid, mobilization of, in adrenalectomized rats, effects of dexamethasone and growth hormone on, 633
Formaldehyde, glycogenic effect of, as related to adrenal cortex, 390

Glucagon, deficiency of, in the fowl, 464
Glucocorticoids, *in vitro* effect on gluconeogenesis of, 399
Gluconeogenesis, D-mannoheptulose-induced, 83
in vitro effect of glucocorticoids on, 399
Glucose, utilization of, in adrenalectomized rats, effects of dexamethasone and growth hormone on, 633
Glucose-C^{14} oxidation, effect of propylthiouracil on, in rat thyroid tissue, 662
Glucosteroids, mode of action of, 605
Glutamine, synthesis of, with diabetic acidosis, 203

Glycogen, body, avian, possible hypophysial control over glycogenesis in, 334
effect of hyperglycemia and hypoglycemia on content of, in pituitary and adrenal glands, 745
effect of epinephrine on level of, 803
Glycogenesis, possible hypophysial control over, in avian glycogen body, 334
Goitrogenesis, TSH during, 244
Goitrogens, and deiodination of T4 and T3, 906
Gonadotropic activity, of chicken pituitary glands, 487
Gonadotropin, essay of, P^{32} in, 790
fluorescent labeled, disappearance from blood of, 179
Growth, decidual, control of, by steroid hormones, 134

Hagfish, Atlantic, corticosteroids in blood of, 329
Hamster, adult, analysis of superovulation in, 378
HeLa cell, sub-lines of, resistant to steroids, 233, 238
Histamine, uterine, in rat deciduomata, 960
H^3-Norethynodrel, orally administered, metabolic fate of, 639
Hormone, bovine growth, effect of, on amino acid accumulation, 516
growth, effect of on amino acid transport, 513
on fatty acid synthesis, 541
synergism of, in hypophysectomized pigeon, 345
human growth, from acetone powder, 559
highly purified, demonstration of several components in, by immunodiffusion, 734
immunologic studies of, 277
human luteinizing, activity measurement of, by latex-HGC agglutination inhibition, 321
imbalances of, response of pineal lipid to, 939
pituitary growth, lactogenic substance related to, 209
production of, by transplanted mammotropic pituitary tumors, 943
purified bovine luteinizing, preparation of, 729
thyrotropic, feedback control of, 452
Hormones, and uterine collagen, 878
influence of, on enzyme reducing systems, 307
male, effect of, on brain excitability, 609
neurohypophysial, antidiuretic responses to, 536
steroid, control of decidual growth by, 134
Hydroxyproline, plasma levels of, influence of parathyroids on, 189
Hyperglycemia, D - mannoheptulose - induced, 90
effect of, on glycogen content of pituitary and adrenal glands, 745
Hypertension, adrenal cortex in maintenance of, 422
experimental, interrelationships between plasma corticosterone and dietary sodium in, 549
Hypoglycemia, effect of, on glycogen content of pituitary and adrenal glands, 745
Hypophysectomy, effects of, on fatty acid synthesis, 541
influence of, on lipolytic activity of rat pancreas, 853
Hypothyroidism, effect of, on sodium chloride aversion of renal hypertensive rats, 683

I^{131}, discrepancies between analyses with I^{127} and, 564
I^{127}, discrepancies between analyses with I^{131} and, 564
Insulin, effect of, on skeletal muscle RNA, 314

XUM

on structural sugars in adipose tissue, 227
Iodide, release from thyroid of, as acute response to epinephrine and norepinephrine, 7
Iodide-binding, *in vitro*, failure of irradiation of serum to enhance, 671

L-3,5,3′-Triiodothyronine (T3), conversion of T4 to, by thyrotropic tumors, 361
L-Thyroxine (T4), conversion to T3 of, by thyrotropic tumors, 361
L-Triiodothyronine, uptake of, by rat erythrocytes, 570
Lactogenic substance, related to HGH, 209
LH content, pituitary, changes of, during rat estrous cycle, 756
Light, effect of, on weight of pineal organ, 130
Limbic system, effect on pituitary-thyroidal function of stimulation of, 456
Lipid(s), pineal, response to hormone imbalances of, 936
synthesis of, effect of thyroxine on, 870
Lipogenesis, defective, hormonal repair of, in hypophysectomized rat, 107
Liver glycogen, cortisol and glucose effects on formation of, 605

Mammary gland, maintenance of, by injections of prolactin, 395
Masculinization, fetal, progestogens in, 448
Metabolism, adenohypophysial, on a goitrogenic diet, 244
of adipose tissue, studies on, 57, 68
glucose, effect of ACTH on, in adrenal, 113
hepatic, effect of anti-insulin serum on, 673
lipide, effects of thyroid hormone in, 425
Methyl reserpate derivatives, endocrine pharmacology of, 527

Necturus maculosus, effects and metabolism of thyroid hormones in, 369
Neurohumor, hypothalamic, ACTH-releasing, in peripheral blood, 298
Norepinephrine, and thyroid iodide release, 7
Norethynodrel, effect of, on ovarian response to gonadotrophic stimulation, 964

Oncogenesis, on a goitrogenic diet, 244
Ovarian response, to norethynodrel, 964
Ovariectomy, unilateral, and ovulatory response of remaining ovary, 664
Ovary(ies) cystic, uptake of P^{32} by, 740
isolated perfused, methods and examples of application, 752
maternal, interrelationships with fetal adrenals of, 31
Oxytocin, assay of, by milk-ejection response, 196
and desamino-oxytocin, comparison of pharmacologic properties of, 977
insulinlike action of, on epididymal adipose tissue, 158

P^{32}, assay of, for gonadotropin, 790
uptake of, by cystic ovary, 740
Pancreas, rat, influence of hypophysectomy on lipolytic activity of, 853
Panhypopituitarism, persistent, production of, 36
Parathyroid hormone, endogenous, sensitization to calciphylaxis by, 554
Parathyroids, influence of, on plasma hydroxyproline levels, 189
Phosphorylase, level of, effect of epinephrine on, 803
Pineal weight, effect of light on, 130
Pituitary, anterior, electron microscope studies on the secretory cytology of, 618
autograft cells, electron microscope study of, 713

gland(s), anterior, prolactin content of, in turkey hens, 288
chicken, gonadotropic activity, of 487
effect of hyperglycemia and hypoglycemia on glycogen content of, 745
effect on testes of autotransplantation of, 176
Pituitary-adrenocortical system, in fetal rat, 799
Pituitaries, isolated, adrenal cortical function in dogs with, 926
Prednisolone, 6-methyl, metabolic and anti-inflammatory properties of, 221
Prednisone, synergism of, in hypophysectomized pigeon, 345
Presidential address (The Heritage of Corpulence), 337
Progesterone, action of, in determining persistence of placental elements, 573
Progestogens, in fetal masculinization, 448
Prolactin, injections of, maintenance of mammary gland by, 395
pituitary, in turkey hens, 288
synergism of, in hypophysectomized pigeon, 345
Propylthiouracil, effect of, on sodium balance of rats, 693
on thyroidal biosynthesis, 580
on thyroxine metabolism, 701
in vivo effect of, on glucose-C^{14} oxidation in rat thyroid tissue, 662
Protein, utilization of, by decidual cells, 822
Proteinases, of rat ovary, 838

Radiation, and thyroid RNA, 914
Reactivity, behavioral, in mice, 267
Renin, experimental vascular disease elicited by, 505
Ribonucleic acid, skeletal muscle, effect of testosterone and insulin on, 314

Serotonin, effect of, on testes, 827
uptake and action of, effect on adrenal cortex of, 407
7,12-DMBA, and adrenal necrosis, 972
Sex modifications, following egg immersion in DES solutions, 24
Sodium balance, effect of propylthiouracil on, 693
chloride, aversion, effect of hypothyroidism on, in renal hypertensive rats, 683
dietary, in experimental hypertension, 549
Sodium-depleted rat, distribution of glycogen, lipid and glucose-6-phosphate dehydrogenase activity in adrenal cortex of, 847
Steroid(s), adrenal, production of, by diabetic dogs, 993
anti-estrogen and anti-mammary tumor activity of, 492
HeLa cell sub-lines resistant to, 233, 238
other, thymolytic activity of corticoids with, 271
structure and androgenicity, 949
Stilbene, estrogenic derivatives of, hepatic and renal effects on potency of, 649
Stress response, in mice, 267
Sugars, structural, in adipose tissue, effect of insulin on, 227
Sulfadiazine, effects on, of thyroidal biosynthesis, 580
Superovulation, analysis of, in adult hamster, 378
Synthesis, fatty acid, effects of adrenalectomy, hypophysectomy, growth hormone and thyroxine on, 541

T4 and T3, deiodination of, and goitrogens, 906
Testes, effect of, on autotransplantation of pituitary gland, 176
of serotonin, 827
Testosterone, effect of, on skeletal muscle RNA, 314

secretion of, in anesthetized dogs, 101
Thiouracil, effect of, on thyroxine metabolism, 701
Thyroid, effects on, of excessive fecal thyroxine excretion, 520
function, effects of 2,4-D on, 1
failure of 6a-methyl-17-α-hydroxyprogesterone acetate to disturb, 660
inhibitory effect of diazo dyes on, 414
gland, activity of tyrosine transaminase in, 636
hormone(s), effects of, in lipide metabolism, 425
and metabolism of, in Necturus maculosus, 369
iodide release from, as acute response to epinephrine and norepinephrine, 7
origin of intracellular colloid droplets in, 120
pituitary, effect of limbic stimulation on, 456
RNA, and radiation, 914
Thyroidectomy, action of, on skin mast cells and peritoneal mast cell $S^{35}O_4$ uptake, 840
Thyroids, T3-treated and hypophysectomized, differences in function of, 816
Thyrotropic activity, on a goitrogenic diet, 244
Thyrotropin, antiserums, immunologic and biologic properties of, 254
biochemically altered, thyroid-stimulating and exophthalmos-producing activity of, 782
effect of tissue slices and oxidizing agents on, 588
exogenous, disappearance rate and distribution of, in rat, 43
Thyroxine, deiodination of, effect of antithyroid compounds on, 94
and TSH secretion, in rats, 859
effects of, on fatty acid synthesis, 541
on lipid synthesis, 870
propylthiouracil and thiouracil on metabolism of, 701
excretion, effects on thyroid of excessive fecal, 520
interaction with diphenylhydantoin, 496
synergism of, in hypophysectomized pigeon, 345
TSH, relationship of, to age, 763
secretion, and deiodination of thyroxine, in rats, 859
Tumor(s), activity, steroid anti-estrogen and anti-mammary, 492
thyrotropic, conversion of T4 to T3 by, 361
transplanted mammotropic pituitary, hormone production by, 943
20α-Hydroxy-Δ^4-pregnen-3-one, formation of, in rat ovaries, 983
2,4-Dichlorophenoxyacetic acid, effects on thyroid function of, 1
Tyrosine transaminase, activity of, in thyroid gland, 636

Urine, aldosterone-stimulating material in, 174
Uterine collagen, and hormones, 878
Utero-ovarian relationships, in the guinea pig, 810

Vascular disease, experimental, elicited by aldosterone and renin, 505

Water, permeability to, effect of benzothiazide derivative on, 332
Woodchucks, seasonal changes in adrenal glands of, 431